

REMARKS

This communication is a full and timely response to the aforementioned non-final Office Action dated October 4, 2007. By this communication, claims 1, 8 and 9 are amended. Claims 2-7 are not amended and remain in the application. Thus, claims 1-9 are pending in the application.

Reconsideration of the application and withdrawal of the rejections of the claims are respectfully requested in view of the foregoing amendments and the following remarks.

I. Amendments to the Abstract

The abstract was objected to for containing less than 50 words. The Office referred to 37 C.F.R. 1.72 in objecting to the abstract for containing less than 50 words. It is noted, however, that 37 C.F.R. 1.72 does not require an abstract to contain between 50 to 150 words. Instead, 37 C.F.R. 1.72 only requires that an abstract not exceed 150 words.

Nevertheless, the abstract has been revised to contain between 50 and 150 words to place the application in condition for allowance. Approval and entry of the amendments to the abstract are respectfully requested. A clean version of the substitute abstract is attached hereto for the Office's convenience.

II. Withdrawn Claims

Claims 10-49 were withdrawn from consideration based on the election of Species I in the Amendment and Response filed on September 10, 2007. Non-elected claims 10-16 and 22-40 were cancelled in the Amendment and Response. Non-elected claims 17-21 and 41-49 are cancelled herein to place the application in condition for allowance. Applicants reserve the right to file appropriate divisional applications directed to the non-elected species disclosed in the present application.

III. 35 U.S.C. § 102 Rejections

Claims 1-3 and 6 were rejected under 35 U.S.C. § 102(b) as being anticipated by Bonneau et al. (U.S. 6,002,794, hereinafter "Bonneau"). This rejection is respectfully traversed for the following reasons.

Claim 1 recites a method for identifying objects in an image. The method of claim 1 comprises receiving an image with a first resolution. The method of claim 1 also comprises processing the image at a second resolution to identify an object in the image at the second resolution. The method of claim 1 also comprises processing the image at the first resolution using the identified object to identify another object. Claim 1 recites that the first resolution is higher than the second resolution.

Accordingly, claim 1 recites that the image is processed at a second resolution to identify an object in the image at the second resolution. The image is also processed at the first resolution using the object identified in the image at the second resolution to identify another object.

Bonneau does not disclose or suggest this feature of claim 1. Bonneau discloses an encoding technique for processing an original unencoded signal that is to be encoded and compressed. With reference to Figure 2, Bonneau discloses that an original unencoded image 201 is subjected to wavelet processing at scale one 270 to produce a low frequency scale one image 203 and a high frequency scale one image 205. Accordingly, the original image 201 is first processed at scale one 270 (see Column 10, lines 18-42).

The low frequency scale one image 203 is then subjected to further wavelet processing at scale two 272 to produce a low frequency scale two image 207 and a high frequency scale two image 209. Bonneau discloses that the second scale 272 is a decomposition of the low frequency portion of the first scale 270 resulting in a decreased resolution of the compressed image. Bonneau discloses that after being subjected to wavelet processing at the second scale 272, the frequency information of the original image 201 is still preserved but not to the extent in the first scale wavelet processing of the original image 201, because a decomposed representation of the original image is being transformed. The resolution of image data 207 and 209 are less than the resolution of the image data 203 and 205 (see Column 10, lines 49-67). A third wavelet processing is then performed on the low frequency scale two image 207 at scale three 272 to produce low frequency scale three 274 to produce low frequency scale three image 211 and high frequency scale three image 213 (see Column 10, line 67 to Column 11, line 13).

Accordingly, Bonneau discloses that a low frequency image 203 is first obtained at a first scale, and then a low frequency image 207 is obtained at a second scale, which is lower than the first scale, in order to sequentially reduce the frequency of an object that is first obtained in the first scale.

Therefore, Applicants respectfully submit that Bonneau discloses an opposite configuration to the features of claim 1. In particular, claim 1 recites that an image is processed at a second resolution to identify an object in the image at the second resolution, and the image is processed at the first resolution using the object identified in the image at the second resolution to identify another object.

On the contrary, Bonneau discloses that an object is obtained at a first scale and then the obtained object is subjected to further processing at a second scale, which is less than the first scale, to sequentially reduce the frequency of the obtained object (see Figure 2). Accordingly, Bonneau does not disclose or suggest that an image is processed at a second resolution to identify an object at the second resolution, and the image is processed at the first resolution using the object identified in the image at the second resolution to identify another object, where the first resolution is higher than the second resolution, as recited in claim 1.

Furthermore, the Office's reliance on Figure 5 of Bonneau is not supportable. Figure 5 of Bonneau illustrates that after the processing illustrated in Figure 2 is completed to sequentially reduce the frequency of the original image 201, domain blocks 501 of scale three 515 are matched to the smaller range blocks of the next lowest scale, i.e., scale two 517. Domain block 505 of scale two 517 is matched to the smaller range blocks 507 of scale one 519 (see Column 13, line 64 to Column 14, line 3). However, the domain blocks and range blocks are calculated after the frequency of the original image 201 has been sequentially reduced through the ordered wavelet processing of scale 1, scale 2 and then scale 3. In other words, the sequentially reduced objects obtained in the high to low scale wavelet processing illustrated in Figure 2 are used for fractal encoding, not for identifying an object at a second resolution and then using the identified object to obtain another object at a first resolution, which is higher than the second resolution, as recited in claim 1.

Therefore, Applicants respectfully submit that Bonneau does not disclose or suggest that an image is processed at a second resolution to identify an object at the

second resolution, and the image is processed at the first resolution using the object identified in the image at the second resolution to identify another object, where the first resolution is higher than the second resolution, as recited in claim 1.

Accordingly, for at least the foregoing reasons, Applicants respectfully submit that Bonneau does not disclose or suggest all the recited features of claim 1.

Consequently, Applicants respectfully submit that claim 1 is patentable over Bonneau.

IV. 35 U.S.C. § 103(a) Rejections

Dependent claims 4, 5 and 7 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Bonneau in view of Hsu (U.S. 5,631,970). Further, dependent claims 8 and 9 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Bonneau in view of Eppler (U.S. 6,084,989).

As demonstrated above, Bonneau does disclose or suggest all the recited features of claim 1. Namely, Bonneau does not disclose or suggest that an image is processed at a second resolution to obtain an object in the image, and the image is processed at a first resolution using the identified object to obtain another object, as recited in claim 1.

Hsu and Eppler each fail to disclose or suggest this feature of claim 1. Consequently, Hsu and Eppler do not cure the deficiencies of Bonneau for failing to disclose or suggest all the recited features of claim 1.

Therefore, no obvious combination of Bonneau, Hsu and Eppler would result in the subject matter of claim 1, since Bonneau, Hsu and Eppler, either individually or in combination, do not disclose or suggest all the recited features of claim 1.

The foregoing explanation of the patentability of independent claim 1 is sufficiently clear such that it is believed that separately arguing the patentability of the dependent claims is unnecessary at this time. However, Applicants reserve the right to do so if it becomes appropriate.

Accordingly, for at least the foregoing reasons, Applicants respectfully submit that claim 1, as well as claims 2-9 which depend therefrom, are patentable over the applied references.

V. Conclusion


In view of the foregoing amendments and remarks, it is respectfully submitted that the present application is clearly in condition for allowance. Accordingly, Applicants request a favorable examination and consideration of the instant application.

If, after reviewing this Amendment, the Examiner feels there are any issues remaining which must be resolved before the application can be passed to issue, the Examiner is respectfully requested to contact the undersigned by telephone in order to resolve such issues.

Respectfully submitted,

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